DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-009186
Date Inspected: 04-Sep-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 700
OSM Departure Time: 1630
Location: Muroran, Japan

CWI Name: Chung Fu Kuan

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking, and Deviation Saddles

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. Art Peterson was present during the times noted above for observations relative to the work being performed in Fabrication shop #4 and the Foundry at Japan Steel Works.

Fabrication Shop #4:

Final Post Weld Heat Treatment Operation in-process on Saddle: Tower Saddle Segment T1-3

The QA Inspector observed that tower saddle segment T1-3 has been placed in a furnace to have the final post weld heat treatment (PWHT) stress relief operation performed.

Final Post Weld Heat Treatment Operation in-process on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed that west deviation saddle segment W2-W3 has been placed in a furnace to have the final post weld heat treatment (PWHT) stress relief operation performed.

NDT Operation in-process on Pipe Sleeves for the West Deviation and West Jacking Saddles

The QA Inspector observed that the fillet weld operation was completed on the pipe sleeves- ASTM A709M Grade 345 steel flanges fit-up to each end of the ASTM A106 (2") schedule 80 pipe to the lengths of (1008.7), (1019.0), and (1020.7) mm (+ 0 / - 3) for the west deviation and the west jacking saddles. Afterwards, the QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. R. Kumagai (#132) performing the magnetic particle test (MPT) inspection (dry method) on the fillet welds on the pipe sleeves for the west deviation and west jacking saddles. The QA Inspector observed that the MPT inspection was in-process on the pipe sleeves at the end of the QA Inspectors' shift.

Fillet Weld Operation completed on MC Shape to Rocker Bearing Plate Assembly: East Saddle E2-E1

The QA Inspector observed that the fillet weld operation has been completed on the miscellaneous channel (MC) shape fit-up to the bearing plate on rocker bearing plate assembly E2-E1.

ABF-RFI-001811R00: Modified MC Shapes for East Saddle Rocker Bearing Plates E2-E1 and E2-W1

1) The QA Inspector observed (2) JSW personnel performing the grinding operation to profile the fillet welds to an acceptable visual profile on the modified miscellaneous channel (MC) shape (13 * 31.8) fillet welded to the rocker bearing plate on east saddle rocker bearing plate E2-E1. See ABF-RFI-001811R00 for the purpose of the modification on the MC shape. On this date, the QA Inspector observed that the total time spent in performing the grinding operation on the fillet welds was (2) hours for (2) JSW personnel- (1) hour each.

Foundry:

NDT Operation in-process on Saddle: East Saddle E2-E1 (cast saddle)

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) personnel Mr. H. Kohama (#86) performing the magnetic particle test (MPT) inspection (wet method) on east saddle E2-E1 on the as finished surface of level (1) areas as shown on the plans on the outside of the trough section and of level (3) areas as shown on the plans on the rib sections of the east saddle. The NIS QC NDT Inspector verified the lifting force of the yoke and the sensitivity of the yoke as per ASTM E709 prior to the start of the MPT inspection. The QA Inspector also verified that the bath concentration of the non-fluorescent particles were between (1.2 and 2.4) mL per (100) mL as per ASTM E709 Section 20.6.3 and the manufacturer recommendations. The actual settling volume was recorded at (2.0) mL as measured using a centrifuge tube with a (1.5) mL stem and after allowing the particles to settle for approximately (30) minutes prior to taking the settling volume measurement. The QA Inspector observed that the MPT inspection performed by Mr. H. Kohama was in-process at the end of the QA Inspectors' shift.

Engineering Communication Sheet (ECS) in-process on Cast Saddle: West Jacking Saddle

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. N. Osawa (#340) completed the minor repair excavation map on the west jacking saddle. The JSW Representative Mr. Hideaki Kon informed the QA Inspector that NIS QC Inspection personnel are in-process in preparing the engineering communication sheet (ECS) for the minor repair excavations prior to the start of the repair weld operation. The excavated areas were previously inspected by NIS QC NDT Inspector Mr. A. Seino (#82) by the liquid penetrant test (PT) method and the magnetic particle test (MPT) method to ensure the complete removal of the rejectable indications at various locations on the west jacking saddle.

Unless otherwise noted in this report, all observations reported on this date appeared to be in general compliance with the applicable contract specifications.

Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy at (510) 385-5910, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Guest,Kittric	QA Reviewer